

**ROAD THROUGH OHIO, INDIANA, AND ILLINOIS.**

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**LETTER**

FROM THE

**SECRETARY OF WAR,**

TRANSMITTING

**A REPORT OF THE CHIEF ENGINEER,**

IN RELATION TO THE

**ROAD THROUGH OHIO, INDIANA, AND ILLINOIS.**

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**DECEMBER 20, 1826.**

Read, and referred to the Committee on Roads and Canals.

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WASHINGTON :

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1826.



## DEPARTMENT OF WAR,

*December 19, 1826.*

SIR: I have the honor to transmit, herewith, a report from the Chief Engineer, of this date, and beg leave to refer to it, and the documents which accompany it, as containing, as far as it can be furnished at this time, the information called for by the resolution of the House of Representatives, dated the 15th instant, respecting the National Road, to be extended from the right bank of the Ohio, opposite to Wheeling, through Ohio, Indiana, and Illinois, to Missouri.

I have the honor to be, sir,

Very respectfully,

Your obedient servant,

JAMES BARBOUR.

The hon. JOHN W. TAYLOR,

*Speaker of the House of Representatives.*



## ENGINEER DEPARTMENT,

*December 19, 1826.*

SIR: In obedience to your instructions I have the honor to transmit, herewith, a copy of the last report, received from the Superintendent of the National Road between Canton and Zanesville, in continuation of the Cumberland Road, with a view to its being furnished to the House of Representatives in fulfilment of the object of the resolution of the House, of the 15th instant, directing the Secretary of War "to communicate to the House the reports that have been made by the Commissioner and the Superintendent of the National Road from the right bank of the Ohio, opposite to Wheeling, through Ohio, Indiana, and Illinois, to Missouri, respecting the survey and location of said road, and such information as he may have in his Department, showing what [progress] is making in the continuation of said road, and the cost and manner of its execution, and which has not, heretofore, been communicated to the House."

The report transmitted herewith, as has been stated, will furnish very fully the information desired by the resolution respecting that part of the road, the construction of which has been commenced, and contains all the information in the Engineer Department, on that subject, which has not already been communicated to Congress.

The report of the Commissioner for extending the location of the road from Zanesville, through Ohio, Indiana, and Illinois, to Missouri, which will embrace such information, in relation to that location, as has not already been communicated to the House of Representatives, and which is also required by the resolution to be furnished to the House, has not, as yet, been received: but it is expected to arrive shortly, and, when received, a copy will be prepared and furnished, without delay.

Respectfully submitted.

ALEX. MACOMB,  
*Major General Chief Engineer.*

The Hon. J. BARBOUR,  
*Secretary of War.*

ST. CLAIRSVILLE. (O.) *October 18th, 1825.*

*To Major General ALEX'R MACOMB,  
Chief Engineer of the United States.*

SIR : In obedience to the regulations of the Engineer Department, requiring the Engineer superintending the construction of a fortification or other work, to furnish an annual report of the progress of the operations during, and their condition at the expiration of, the year ending on the 30th of September, I have the honor to report :

That, in pursuance of contracts made previously and subsequently to the 30th of September, 1825, twenty-eight miles and eighty-eight poles of the road authorized by the act of Congress of the 3d March, 1825, to be constructed between Canton and Zanesville, in the State of Ohio, has been under a progressive state of construction. On the 30th of September, all the masonry on the line, with the exception of three bridges and some walls, was completed. The unfinished bridges and walls were in a forward state, and will be finished by the 1st of December. The number of perches completed, was twenty-six thousand five hundred and thirty-three, for the sum of thirty-six thousand one hundred and eighty-four dollars and sixty-three cents, being an average cost of nearly one dollar and thirty-six and a half cents per perch. In the admeasurement of the masonry, no allowance of girt, and half or double girt, for pier heads, arches, &c., is made ; the cubical or solid content being alone taken. The masonry has been executed in a style of substantiality, at least equal, in my opinion, to that upon any highway which has come under my observation. With a view to ascertain the extent of road which could be put under contract last year, having a regard to a cover of metal six inches in thickness, the Agent of Masonry was directed to furnish an estimate of the probable quantum of masonry which would be requisite on the line between the Ohio River and the Village of Fairview. That was done, and it was supposed that the estimate thus far wished, was ample. It was, however, impossible to judge accurately of the depth of foundation, which a due regard to permanency would require, until actual excavation was made. In almost every instance, a greater depth was found necessary than had been considered in the estimate. A further examination also proved, conclusively, that the expansive quality of the earth, in most situations, required the sustaining masonry to be heavier, in order to effect security, than had been relied upon in the estimate. The consequence will be, that the cost of the masonry will exceed the estimate about the sum of twenty-five thousand dollars.

Nearly all the graduation was finished on the 30th of September ; nine miles and one hundred and eighty poles were covered with three



inches of stone; eight miles and one hundred and seventeen poles with six inches, making together seventeen miles and two hundred and ninety-seven poles, laid with covers of three and six inches, and leaving a balance uncovered of ten miles and one hundred and eleven poles; and, at that time, it was estimated that there were stone on the line reduced to the proper size, sufficient in quantity to cover fifteen miles and two hundred and fourteen poles, three inches in thickness. There were, also, on the line, a considerable quantity of unbroken stone.

The contracts required the completion of the first division on the 1st of July, and of the second and third divisions on the 1st of September, 1826. Several causes have operated to prevent a fulfilment of those engagements. The Spring season, as well as the month of June and part of July, was unusually wet, so much so, as to occasion a suspension of the work of graduation nearly altogether, and greatly check the operations of procuring and reducing stone. The failure to complete, by the stipulated times, is, however, in my opinion, mainly attributable to the novelty of the plan adopted. The contractors were unacquainted with it, and were greatly deceived in their estimate of the quantum of labor which the reduction of the stone to the proper size would require; and, in consequence, did not employ as many laborers as they otherwise would have done. It is, nevertheless, confidently expected that the greater portion of the line will be finished in the course of two months. To ensure a faithful and punctual fulfilment of future contract, it seems almost indispensably necessary that some step should be taken in relation to the present ones. To require a forfeiture of a portion of the sum stipulated, would, perhaps, under the peculiar circumstances of the case, be rather oppressive, especially when, in many instances, neglect cannot be fairly charged, and when it is considered that many of the contracts were taken at prices really below their value. It is respectfully suggested for your consideration and instruction, whether a refusal to accept of the contracts for a time after their completion, or until Spring, would be a measure sufficiently strong to mark the displeasure of the Government, and to operate as a stimulus on future contractors to complete their undertakings within the prescribed time. Of this measure, the contractors could not justly complain. It is, however, but justice to the contractors to remark that, in the history of the public works of this country, and for the number of the contractors, it is believed, that fewer instances of abandonment of contract have not occurred, and that for the general good deportment and correct conduct on the part of both contractors and laborers, this work is, perhaps, unexampled. Only one of the road contractors, and one of the contractors of masonry, have abandoned their contracts. In those cases, no injury has resulted to the Government, as both contracts have been let for the unpaid balance of the original contracts. Fears are entertained that a few more, who took contracts below their value, may be compelled, for the want of funds, to abandon them, and that the unpaid balance may be inadequate to

their completion. A strong hope is nevertheless indulged, that those fears may prove to have been unfounded.

I was pleased, on the 9th of September, with the company of J. L. Smith, Esq. Captain of the Corps of Engineers, who had been charged by you with the examination of the operations under my direction. The whole line was shown to him, which he examined very minutely, and I hope his report may give a satisfactory account of the progress and execution of the work. His presence cannot fail of promoting the good of the service, as an opportunity was afforded, of which I availed myself, of deriving from him many useful hints, and much valuable information, respecting the work confided to my superintendency. By him I was authorized to contract for an additional or third layer of metal of three inches in thickness. to be laid upon such parts of the road as the travel must be admitted upon during the approaching Winter, which parts together comprise a distance of nearly eight miles. This measure was thought advisable, to save those parts from apprehended destruction. The cover could not acquire, before Winter, that compactness and solidity essential to render it impervious to water, and of course would not resist the pressure of the narrow wheels of heavy laden carriages. The additional layer is intended as a provision for the want of solidity in the best way which that object could be effected. From those parts where it can, the travel will be excluded, until the weather becomes settled in the Spring. Although, in my opinion, a cover of metal of six inches in thickness will become impervious to water after it shall have attained a state of complete solidity, and will be impenetrable to the wheels of every description of carriage, unless the frost and wet season should make a more serious impression upon it than I expect; I would, nevertheless, urgently recommend that the whole line should be covered early next Summer, with an additional layer of three inches. Unless this is done, there will be no provision for wear. Contracts have been made for some of those parts, from which the travel cannot be turned, at prices varying from \$3 25 to \$4 per pole, forming an average approximating \$3 75 per pole, or \$1,200 per mile. This is higher than I had expected to pay, and is much owing to the improper reluctance which I find persons disposed to contract feel, at undertaking jobs on unfinished contracts. On some places the additional stratum has been laid.

Under the instruction of the Department, Jonathan Knight commenced the location of the line between Fairview and Zanesville early in the month of May, and completed it on the 22d of July. As much of my time as could with propriety be spared from the line Eastward of Fairview was devoted to that service. The location is a very eligible one; and, if compared with the route of the present travelled road, will seem to pass through quite another country. After the location was completed, the whole distance between those towns (44 miles and 136 two pole chains,) was divided into four divisions, numbered 4, 5, 6, 7, and those again into sections. The 4th division terminates at a point a short distance West of the town of Washington; the 5th



at the West end of the town of Cambridge ; the 6th on the summit of a ridge dividing the waters of Wills' creek on the East from those of Big Salt creek on the West ; and the 7th at the Eastern boundary of Zanesville.

On the 25th of July I caused advertisements to be inserted in newspapers, printed in such parts of the country as was thought best calculated to promote the object in view, inviting the presentment of proposals from the 25th of August to the 11th of September, for the construction of about thirty miles of road, and the necessary bridges and other masonry. The competition was considerable, and the road was taken in the aggregate at a fair price ; some sections a little above, and some perhaps a little below their value. On a portion of the new line much more labor will be required to effect the graduation than was requisite on any part of the old line of equal length. The masonry has been taken at higher rates than that upon the old line. Labor has advanced since the contracts of last year were made ; the country through which the new line runs does not afford the facilities of the old line in the procurement of provisions, provender, tools, &c. and the stone for the masonry is generally more distant from the sites of the bridges. Great difficulty, it is feared, will be experienced in obtaining stone of a suitable quality for the cover of the road. Indeed it is apprehended that good stone cannot be procured at all upon some portions of the line.

Proposals were received for twenty-eight miles of the line, and contracts have been closed for the fourth and fifth divisions, containing together twenty miles and three hundred and eight poles. Exhibits A and B, show the names of the contractors, the number and length, the price per pole, and total cost of each section.

That the masonry of an inferior quality, such as culverts, &c. might fall into the hands of competent and experienced masons, as well as that of a better quality, the line was divided into contracts of mason's work ; each contract embracing all the masonry of every description on particular sections of the road. Exhibit C shows the number of the contract ; the names of the contractors ; the description of the masonry ; the estimated quantity and price per perch of each description ; and the total cost of each contract.

The contracts for the road are so framed that they may be concluded when the graduation is completed. This course would not be desirable ; and, in my opinion, ought not to be adopted unless compelled by the want of funds. That the road, when graduated, may become completely settled, which is considered very important before the cover is put on, the contractors are required to admit the travel upon it on the 1st of July, 1827, and to suffer it to continue on until the 1st of May, 1828. During this period the contractors are bound to fill up sunken parts, open side drains, and to do such other work as the Superintendent shall direct.

By putting only the 4th and 5th divisions under contract, having regard to the graduation and bridging alone, and after paying up the contract on the old line, there will remain a balance, of the appropria-

tions of 1825 and 1826, of nineteen thousand eight hundred and thirteen dollars and nineteen and a quarter cents, exclusive of the contingent expenses which will have accrued after the 30th of September, as is shown in detail by the following statement, viz :

Appropriation of 1825	-	-	-	-	\$140,000 00
Do. of 1826	-	-	-	-	110,000 00
					<hr/>
					\$250,000 00
Cost of the 1st division with a cover of 6 inches	-	37,349	91		
Cost of the 2d division with a cover of 6 inches	-	29,695	09		
Cost of the 3d division with a cover of 6 inches	-	25,115	37		
Cost of masonry finished, 26,533 perches	-	36,184	63½		
Cost of masonry unfinished, but in a forward state of progress, estimated	-	19,700	00		
Cost of additional or 3d lay- er of stone on 8 miles	-	9,600	00		
Amount of allowances for changes of location; for alterations of lines of gra- duation; and for land- slips, and other unfore- seen accidents, at the rate of about \$100 per mile on 28 miles and 88 poles	-	2,825	00		
Amount of contingent ex- penses which have ac- crued and been paid on both lines up to 30th Sept.		7,328	92½		
				<hr/>	167,798 92½
Cost of the graduation of the 4th division (exhibit A.)		16,741	58		
Cost of the graduation of the 5th division (exhibit B.)		16,608	70		
Cost of the masonry on the 4th and 5th divisions (ex- hibit C.)	-	29,037	60		
				<hr/>	62,387 88
					<hr/>
					\$230,186 80½
					<hr/>
Balance					\$ 19,813 19½

This balance will be applicable to the payment of all contingent charges; of expenditures for repairs which will be pretty considerable; of excess of masonry, if there should be any; of changes and

alterations of location ; of indemnity for injuries done to real estate, and of various miscellaneous expenditures. A large contingent fund ought to be retained ; but it perhaps may be thought a measure of over-caution to set aside so large a sum as this balance ; and, it most undoubtedly would be, if an appropriation at the approaching session of Congress could be relied upon with perfect certainty. The estimate of masonry proved fallacious last year ; but it was made this year, after a caution to the agent that it should be made so full that no doubt could be reasonably entertained of its sufficiency, and reliance is therefore placed upon it.

The first section of the 6th division, of sixty-nine poles in length, commences at a point in the present travelled road, and, diverging a little distance from it after crossing Wills' creek, again intersects it. The graduation of this section, and the erection of the masonry upon it, will cost a considerable sum. There being a toll-bridge across the creek, the old road being good, and no distance lost, no interruption or inconvenience will be experienced by the travel, if the construction of this section and bridge be postponed for a season, or until funds are more abundant. The 2d and 3d sections of the 6th division are together 395 poles, or nearly a mile and a quarter long. Those sections deflect from the old road to the North ; and, after passing over the dividing ridge, between Wills' creek and Crooked creek, and crossing the latter creek to the West side of the low and wet grounds, which are adjacent to it, again intersect the old road. The construction of those sections, and the masonry necessary on them, would contribute greatly to the benefit and comfort of the traveller, as the old road, between the points of their commencement and termination, is extremely bad ; and part of it, at times, is rendered impassable by the floods of Crooked creek. The cost of the graduation of those sections, and the masonry, would be about the sum of nine thousand five hundred and sixty dollars ; which, being deducted from the preceding balance, leaves the sum of ten thousand one hundred and twenty-one dollars and nineteen and a quarter cents. If an appropriation, at the next session of Congress, could be relied upon with absolute certainty, not only those sections but the next two, embracing a distance of 511 poles, or a little more than a mile and a half, might be also put under contract, which can be accomplished at a cost of two thousand eight hundred dollars for the graduation and masonry ; and, at the end of those sections, an intersection with the old road again takes place. If those two latter sections should be put under contract, the balance would be reduced to about the sum of seven thousand three hundred dollars—a greater sum than prudence would require to be retained if no doubt could be entertained of another appropriation being made. The inclosed rough sketch will give some idea of the relative situation of the old road to that of the location. If all those sections, to wit : the 2d, 3d, 4th, and 5th, are put under contract, the whole distance let will then exceed  $23\frac{1}{2}$  miles. The instructions of the Department, in relation to the sections just adverted to, are respectfully solicited as early as practicable and convenient.

The accompanying exhibit gives the following results :

		<i>per pole.</i>	<i>per mile.</i>
1st.	That the average cost of the graduation alone of the 4th division, exclusive of masonry and of all contingencies, will be - -	\$ 4 32	\$ 1,373
2d.	That the average cost of the graduation alone of the 5th division, exclusive of masonry and of all contingencies, will be - -	6 09	1,949
3d.	That the average cost of the graduation of the 4th and 5th divisions, exclusive of masonry and all contingencies, will be - -	5 06	1,619
4th.	That the average cost of the masonry on the 4th and 5th divisions, exclusive of the road and of all contingencies, will be - -	4 40	1,408
5th.	That the average cost of the graduation and masonry on the 4th and 5th divisions, exclusive of all contingencies, will be - -	9 46	3,027
6th.	That the average cost of the 1st stratum of metal on the 4th and 5th divisions, exclusive of masonry and of all contingencies, will be - -	3 36	1,075
7th.	That the average cost of the 2d stratum of metal on the 4th and 5th divisions, exclusive of masonry and of all contingencies, will be - -	3 53	1,129
8th.	That the average cost of the 2d stratum of metal on the 4th and 5th divisions, exclusive of masonry and all contingencies, will be - -	11 22	3,590
9th.	That the average cost of the graduation and cover of 6 inches of the 5th division, exclusive of masonry and of all contingencies, will be - -	13 00	4,160
10th.	That the average cost of the graduation and cover of 6 inches of the 4th and 5th divisions, exclusive of masonry and of all contingencies, will be - -	11 95	3,824
11th.	That the average cost of the graduation, cover of 6 inches, and masonry, of the 4th and 5th divisions, exclusive of contingencies, will be - -	16 29	5,212

Both road and mason's work has been partially commenced on the new line, and a general commencement will be made in the course of a few weeks.

To effect the graduation and bridging of the remaining distance to Zanesville, (21 miles and 19 poles,) to cover the balance of the old line, (20 miles and 88 poles,) with the 3d, and the new line with the 1st and 2d strata of metal, I would, respectfully, offer the following rough estimate of the amount which will be necessary to accomplish those very highly important objects :

1.	Graduation and bridging 21 miles and 19 poles -	\$65,350 00
2.	To cover 20 miles and 88 poles of the old line with the 3d layer of metal, \$1,200 per mile -	24,330 00



3. Contracted cost of a cover of 6 inches upon the 4th division (exhibit A,) - - - -	26,705 91
4. Contracted cost of a cover of 6 inches upon the 5th division (exhibit B,) - - - -	18,820 10
5. Cover of 6 inches upon the 2d, 3d, 4th, and 5th sections of the 6th division - - - -	6,660 00
6. Contingencies 10 per centum - - - -	14,186 60
	<hr/>
	\$ 156,052 61

This estimate, I feel assured, will approximate the truth, but I would most respectfully suggest the propriety of asking Congress for an appropriation of one hundred and seventy-five, or two hundred thousand dollars. It is unnecessary for me to remark that the more rapidly the work is prosecuted, the less will be the amount requisite for contingent expenses, as you have, heretofore, expressed your views upon that subject. The whole line from the river to Zanesville can be put in travelling condition, by the month of June or July, 1828, if the appropriation be granted at the next session of Congress.

In the progress of the work, some of the contractors have experienced much difficulty and have been subjected to expense in obtaining a supply of stone. However incredible it may appear, it is nevertheless true, that, for this material, which, were it not for the construction of the road, would be of very trifling or no value to the proprietor, a charge is made, and, indeed, in some instances, it has been refused altogether. This operates very injuriously upon the work. The contractor must, in justice to himself, so frame his proposal as to meet the risk of this contingency, and of course proposes at a higher rate than he would do under other circumstances. It is suggested whether some legislative interference, calculated to remedy this evil, could not be obtained on application to the respective legislatures of the States through which the road does or may pass.

All which is respectfully submitted.

CASPAR W. WEVER,

*Superintendent U. S. Road.*



## A.

**STATEMENT** exhibiting the number and length of the Fourth Division of the National Road between Canton and Zanesville, in the State of Ohio; the names of Contractors, and the price per pole for the graduation; the price per pole for a cover of three inches in thickness of stone, broken to such a size as not to exceed four ounces in weight, including the graduation; the total cost of each section for the graduation alone; the total cost of each Section, with a cover of three inches of stone; and the total cost of each section when finished with a cover of six inches of stone.

No. of Section.	Length of Section.	CONTRACTORS' NAMES.	Price per pole for graduation.	Price per pole for the graduation and a cover of three inches of stone.	Price per pole for the graduation and a cover of 6 inches of stone.	Total cost of section for graduation alone.	Total cost of section for the graduation & a cover of three inches of stone.	Total cost of section for the graduation and a cover of six inches of stone.
1	215	Arthur Taggart - - -	\$4 87	\$ 7 93	\$ 10 98	\$1,047 05	\$1,704 95	\$ 2,360 70
2	242	James Noon and Philip McGinis - - -	5 00	8 00	12 00	1,210 00	1,936 00	2,904 00
3	266	Patrick Dowd - - -	3 50	7 00	10 50	931 00	1,862 00	2,793 00
4	321	James Speer - - -	4 00	7 50	11 00	1,284 00	2,407 50	3,531 00
5	260	William Dougherty. &c. - - -	3 49	6 86	10 23	907 40	1,783 60	2,659 80
6	295	William Armstrong - - -	4 25	7 50	11 75	1,253 75	2,212 50	3,466 25
7	42	Lloyd and Wilson - - -	5 00	8 25	11 50	210 00	344 50	483 00
8	319	Robt. McAlister and Peter Corugn - - -	5 87	9 25	12 93	1,872 53	2,950 75	4,124 67
9	218	Tully Gallagher - - -	2 75	6 12	9 49	792 00	1,762 56	2,733 12
10	321	James McDermott - - -	2 50	5 50	8 50	802 50	1,765 50	2,728 50
11	149	Josiah Spaulding - - -	7 00	10 00	13 00	1,043 00	1,490 00	1,937 00
12	277	Timothy Camfield - - -	3 50	6 75	10 00	969 50	1,869 75	2,770 00
13	213	Daniel O'Neil - - -	4 00	7 50	11 00	852 00	1,597 50	2,343 00
14	255	Patrick King and O'Neal - - -	7 00	10 50	13 50	1,785 00	2,677 50	3,442 50
15	215	Thomas Monaghan - - -	3 99	6 99	9 93	857 85	1,502 85	2,134 05
16	264	Simon Beymer - - -	3 50	7 50	11 50	924 00	1,980 00	3,036 00
3,872		Graduation and cover of six inches - - -	-	-	\$ 43,447 49	\$16,741 58	\$ 29,849 46	\$ 43,447 49
		Deduct the graduation - - -	-	-	16,741 58			
		Leaves, as the cost of the cover, this sum - - -	-	-	\$ 26,705 91			

## B.

**STATEMENT** exhibiting the numbers and length of the Sections of the Fifth Division of the National Road, between Canton and Zanesville, in the State of Ohio; the names of the Contractors; the price per pole for the graduation; the price per pole for a cover of three inches in thickness of stone broken to such a size as not to exceed four ounces in weight, including the graduation; the total cost of each section for the graduation alone; the total cost for each section with a cover of three inches of stone, and the total cost of each section when finished with a cover of six inches of stone.

No. of Section.	Length of Section.	NAMES OF CONTRACTORS.	Price per pole for graduation.	Price per pole for the graduation and a cover of 3 inches of stone.	Price per pole for the graduation and a cover of 6 inches of stone.	Total cost of section for the graduation alone.	Total cost of section for the graduation & a cover of three inches of stone.	Total cost of section for the graduation & a cover of six inches of stone.
1	126	Royal Humphreys - - -	\$ 3 00	\$ 5 75	\$ 8 50	\$ 378 00	\$ 724 50	\$ 1,071 00
2	140	Benjamin Thompson - - -	8 62	11 61	14 60	1,206 80	1,625 40	2,044 00
3	130	James Kennedy - - -	4 26	7 51	10 76	553 80	976 30	1,398 80
4	211	Charles McKinney - - -	15 00	19 00	23 00	3,165 00	4,009 00	4,835 00
5	242	John Kinney - - -	5 00	8 00	11 00	1,210 00	1,936 00	2,662 00
6	393	Peter McKown & Co. - - -	3 80	7 45	11 10	1,493 40	2,927 85	4,362 30
7	375	Joft and Gates - - -	10 00	13 50	18 00	3,750 00	5,062 50	6,750 00
8	104	Lloyd and Wilson - - -	6 00	9 00	12 00	624 00	936 00	1,248 00
9	289	W. I. and P. Monaghan - - -	3 40	6 40	9 40	982 60	1,849 60	2,716 60
10	210	John Fande - - -	3 00	6 00	9 00	630 00	1,260 00	1,890 00
11	276	C. Niswanger - - -	5 00	9 00	13 00	1,380 00	2,484 00	3,588 00
12	230	Wm. McDonald - - -	5 37	8 37	12 37	1,235 10	1,925 00	2,845 10
2,726 Graduation and cover of six inches - - -				\$ 35,428 80		\$ 16,608 70	\$ 25,716 15	\$ 35,428 80
Deduct the graduation - - -				16,608 70				
Leaving, as the cost of the cover, this sum - - -				\$ 18,820 10				

# EXHIBIT C.

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*SHOWING the names of the Contractors of Masonry on the Fourth and Fifth Divisions of the United States' Road, between Canton and Zanesville, Ohio; the number of the Contract; the sections of Road embraced; the description and estimated quantum of each kind of work; and the price of each description per perch, and the total cost of each Contract.*

NAMES OF CONTRACTORS.	No. of Contract.	SECTION OF ROAD EMBRACED.	Perches of Gothic arches, culverts, and walls.	Perches of bridges of a chord of, and under, 12 feet	Perches of bridges of a chord over 12 feet.	Price of Gothic culvert, and wall work, per perch.	Price of bridge work under 12 ft. chord, per perch.	Price of bridge work over 12 ft. chord, per perch.	Total number of perches in each contract.	Total cost of each contract.
James Kinkead, sen. -	1	1st, 2d, 3d, 4th, 5th & 6th sec. 4th divis.	1,375	750	-	\$ 1 00	\$ 1 72	-	2,125	2,687 50
Lloyd and Wilson -	2	7th section of the 4th division -	-	-	1,000	-	-	\$ 2 25	1,000	2,250 00
James Kinkead, sen. -	3	8th, 9th and 10th sects. 4th division -	540	750	-	1 12	1 87	-	1,290	2,007 30
Josiah Spalding -	4	11th section of 4th division -	-	350	2,000	-	2 25	3 00	2,350	6,787 50
John McCartney -	5	12th and 13th sections of 4th division -	735	300	-	1 25	2 00	-	1,035	1,518 75
Johnston & McCormick -	6	14th, 15th, and 16th sects. 4th division	715	1,237	-	84	1 48	-	1,952	2,487 60
Clark and McMullin -	7	1st, 2d, 3d, and 4th sects. 5th division -	665	1,000	-	1 37	1 50	-	1,665	2,411 05
William Pagard -	8	5th, 6th, and 7th sect. 5th division -	960	1,050	-	1 37	1 62	-	2,010	3,016 20
Lloyd and Wilson -	9	8th section of the 5th division -	50	-	1,500	1 37	-	2 25	1,550	3,443 50
Lloyd and Wilson -	10	9th, 10th, 11th, and 12th sect. 5th divis.	860	250	500	1 37	1 50	1 75	1,610	2,428 20
								Dolls.	16,587	29,037 60

[Doc. No. 18.]